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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,457	12/11/2001	Paul G. Davis	9797-0085-999	1703

24341 7590 12/26/2003

Pennie & Edmonds, LLP  
3300 Hillview Avenue  
Palo Alto, CA 94304

EXAMINER

BATAILLE, PIERRE MICHE

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 12/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/014,457

Applicant(s)

DAVIS ET AL.

Examiner

Pierre-Michel Bataille

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 1-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38 and 46 is/are rejected.
- 7) ☒ Claim(s) 39-45 and 47-54 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is taken in response to Applicant pre-amendment filed on the same day of the application. Claims 1-37 have been cancelled and claim 38-54 have been introduced in lieu of the cancelled claims.

### ***Specification***

2. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 120. The applicant is reminded of the duties to disclose all information known as defined in 37 C.F.R. 1.56.

The information disclosure statement filed May 17, 1999 has been placed in the application file, the information referred to therein has been considered as to the merits.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 38 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 5,778,419) and over Quattromani et al. (US 5,740,398).

With respect to claims 38 and 46, Hansen teaches a memory system comprising:  
a communication channel coupled to a master memory device and a slave memory

device [140, Fig. 1, 620, Fig. 6, 820, Fig. 8; Col. 2, Lines 38-42; memory core having a plurality of control inputs and a datapath for reading and writing operations and executing memory access commands and generating memory access responses Col. 3, Lines 44-55]; the master memory device configured to generate control information and associated data information including a plurality of write commands with associated write information [memory core executing memory access commands and generating memory access responses Col. 3, Lines 44-55] for each write command to slave memory device followed by any operation code other than a read or write command to the slave memory device followed by a read command [the master device comprising memory element for temporary storage of memory access commands and response information and forwarding data wherein, for each write command, controlling flow of data output stream comprising memory access responses, forwarding data and clock signals Col. 3, Lines 34-42, Lines 48-64]; the slave memory device configured to process the read command and complete the processing of at least one of plurality of write commands [slave device executing memory access commands and generating memory access responses Col. 3, Lines 25-34, Col. 3, Lines 23-32; Col. 6, Line 66 to Col. 7, Line 45]. Hansen teaches a requester arbiter allowing priority to read requests over write requests [Col 12, Lines 40-44; Col. 7, Line 61 to Col. 8, Line 4], but fails to specifically detail the order or operation, i.e. processing said memory read command prior to said memory write command or said slave memory device performing said memory read command prior to performing said memory write command. However, Quattromani teaches microprocessor chip comprising a memory core processing

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memory read command prior to memory write command, the system includes a write buffer which buffers the writing of data from the CPU core to the data buffer prior to retiring of the data to the cache memory core [Col. 2, Lines 46-50; Col. 8, Lines 46-58], the data buffered in said data buffer include a plurality of cross dependency control bits wherein read accesses are handled relative to write accesses and wherein read accesses are source data to the processor core prior to retiring the data to the cache memory core [Col. 12, Lines 55 to Col. 13, Line 10]. Therefore, it would have been obvious to one having ordinary skill in the art and having the teachings of Hansen and Quattromani before him at the time of the invention to process memory read command prior to memory write command, as taught by Quattromani, in combination the memory system taught by Hansen, because, as taught by Quattromani, memory read operation would not be impacted by write operation performed by the core and it would avoid the possibility that incorrect data may be source to the CPU from a later allocated but not yet executed write operations [Col. 13, Lines 10-15; Col. 3, Lines 2-5].

### ***Allowable Subject Matter***

5. Claims 39-45 and 47-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

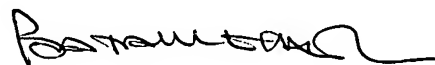
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,182,207 (Milhaupt et al) teaching microcontroller with register system for the indirect accessing of internal memory via auxiliary register

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (703) 305-0134. The examiner can normally be reached on Tue-Fri (7:30A to 6:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Pierre-Michel Bataille  
Primary Examiner  
Art Unit 2186

December 15, 2003